II. CLAIM AMENDMENTS

1. (Previously Presented) A method of injecting an AC pilot tone into a digital signal comprising:

setting the power of said digital signal via a digital-to-analog converter having a reference input for connection to a DC reference signal ; and

injecting said pilot tone into said reference input of said digital-to-analog converter.

2. (Previously Presented) The method of claim 1, comprising applying to said reference input of said digital-to-analog converter a weighted sum (K_1, K_2) of said DC reference signal and said AC pilot tone.

3. (Previously Presented) The method of claim 1, wherein said digital-to-analog converter has an output and exhibits a transfer function between said reference input and said output, wherein said transfer function has a high-frequency roll-off, the method including associating with said reference input of said digital-to-analog converter a pre-emphasis network for compensating for said roll-off.

4. (Currently Amended) The method of claim 2, comprising providing, interposed in between said ~~pre-emphasis network~~ DC reference signal and said AC pilot tone and said reference input of said digital-to-analog converter, a summation node for generating said weighted sum.

5. (Previously Presented) The method of claim 1, comprising providing a laser source for generating said digital signal as a stream of optical pulses, the power of said pulses being set by said digital-to-analog converter.

6. (Previously Presented) The method of claim 5, comprising:

providing a laser driver having an input for setting the modulation current of said optical pulses; and

driving said setting input of the laser driver via the output of said digital-to-analog converter .

7. (Previously Presented) The method of claim 6, comprising:

sensing the DC component and the AC component of the signal applied to said setting input, and

controlling said digital-to-analog converter as a function said DC and AC components to maintain a constant modulation depth in said stream of optical pulses having superimposed said pilot tone.

8. (Previously Presented) A device for injecting an AC pilot tone into a digital signal, comprising:

a digital-to-analog converter wherein the power of said digital signal is set by said digital-to-analog converter said digital-to-analog converter having a reference input for connection to a DC reference signal ; and

a source of said pilot tone, said source being arranged to inject said pilot tone into said reference input of said digital-to-analog converter .

9. (Previously Presented) The device of claim 8, comprising a summation node for receiving said DC reference signal and said AC pilot tone to generate therefrom a weighted sum (K_1, K_2) of said DC reference signal and said pilot tone, wherein said weighted sum is applied to said reference input of said digital-to-analog converter.

10. (Previously Presented) The device of claim 8, wherein said digital-to-analog converter has an output and exhibits a transfer function between said reference input and said output, wherein said transfer function has a high-frequency roll-off,

and wherein associated with said reference input of said digital-to-analog converter there is provided a pre-emphasis network for compensating for said roll-off.

11. (Previously Presented) The device of claim 9, wherein said summation node for generating said weighted sum is interposed between said pre-emphasis network and said reference input of said digital-to-analog converter.

12. (Previously Presented) The device of claim 8, wherein the device is associated with a laser source for generating said digital signal as a stream of optical pulses, the power of said optical pulses being set by said digital-to-analog converter.

13. (Previously Presented) The device of claim 12, comprising a laser driver having an input for setting the modulation current of said optical pulses and, wherein said setting input of the laser driver is set by the output of said digital-to-analog converter.

14. (Previously Presented) The device of claim 13, comprising:

a sensing line for sensing the DC component and the AC component of the signal applied to said setting input; and

a controller unit connected with said sensing line and configured to act on said digital-to-analog converter via said reference input to maintain a constant modulation depth in said stream of optical pulses having superimposed said pilot tone as a function of said DC and AC components sensed.